

## ABSTRACT OF THE DISCLOSURE

A polymethylaluminoxane preparation exhibiting excellent storage stability with a high yield is provided. A polymethylaluminoxane preparation is formed by thermal decomposition of an alkylaluminum compound having an aluminum-oxygen-carbon bond, the alkylaluminum compound being formed by a reaction between trimethylaluminum and an oxygen-containing organic compound. In this preparation,

(i) the oxygen-containing organic compound reacting with trimethylaluminum is an aliphatic or aromatic carboxylic acid represented by the general formula (I),



wherein  $R^1$  represents a hydrocarbon group of C1-C20 straight or branched alkyl groups, alkenyl groups or aryl groups, and  $n$  represents an integer of 1 to 5;

(ii) a mole fraction of methyl groups originating from trimethylaluminum, relative to the total moles of methyl groups existing in the generated polymethylaluminoxane preparation is not more than 26 mol%; and

(iii) the generated polymethylaluminoxane preparation has a viscosity of not more than  $2.1 \times 10^{-3}$  Pa•sec at 40°C.